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| 09/660,733 | 09/13/2000 | James S Wilson | 004578.1073 | 7374 |
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| BAKER BOTTS LLP 2001 ROSS AVENUE 6TH FLOOR DALLAS, TX 75201 | | | CIRIC, LJILJANA V | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3753 | |

DATE MAILED: 08/24/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/660,733

Applicant(s)

WILSON ET AL.

Examiner

Ljiljana (Lil) V. Ciric

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2002 and on 17 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) 3, 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-10, 13-18 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 15.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the amendment and arguments filed on September 20, 2002 and on October 17, 2002. Entry of the amendment filed on September 20, 2002 is hereby acknowledged.
2. Claims 1 through 18 and 20 through 24 remain in the application, all as amended, either directly or indirectly. Claims 3, 11, and 12 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions or species, there being no allowable generic or linking claim.
3. While applicant's request for reconsideration of the finality of the rejection of the last Office action is *not* persuasive, the finality of the previous Office action is hereby being withdrawn for the reasons set forth in the Interview Summary mailed on December 3, 2002 [Paper No. 14].

Response to Arguments

4. Applicant's arguments filed on September 20, 2002 and on October 17, 2002 have been fully considered but they are generally not persuasive.

First of all, regarding applicant's arguments regarding the examiner's refusal (as per the Advisory Action) to enter the amendment filed after final on September 20, 2002, it is hereby noted by the examiner that, even though applicant's proposed amendment was deemed by the examiner to have overcome most if not all of the previously cited rejections of the claims under 35 U.S.C. 112, second paragraph, entry of amendments is NOT automatic nor a matter of right after final rejection, AND the scope of the claims is changed by the aforementioned amendment, as noted by the examiner during the interviews and on the cover sheet for the facsimile transmission associated with the telephonic interview of September 5, 2002. The only reason that the examiner has agreed to enter the after final amendments filed on September 20, 2002 is as a courtesy to applicant as noted in Paper No. 14, to compensate for the inadvertent delay by the USPTO in processing the second response after final filed on October 17, 2002.

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Contrary to the attorney's statement made on page 9, lines 8-10, of the reply filed on September 20, 2002, the examiner did NOT agreed at the time that the scope of the claims would *not* be changed by the amendment. The changes were proposed by the examiner only AFTER an applicant-initiated telephonic interview with applicant's attorney on September 5, 2002. And, as already noted above, the examiner clearly noted to the attorney prior to applicant's submission of the amendment that due to the indefiniteness of the original claims, the examiner did not heretofore understand the intended scope of the claims until AFTER the clarifying comments presented by applicant's attorney during the same interview.

The examiner had understood at the time that the proposed changes would be used as the basis for a supplemental amendment to be filed with an RCE , for example, not for an after-final amendment to be entered as is, particularly since no agreement was reached regarding the applicability (or lack thereof) of the prior art applied as part of the prior art rejections which were under consideration at the time.

With regard to the previously cited prior art rejections of the claims, the examiner hereby wishes to reiterate that the claims in a pending application should be given their *broadest* reasonable interpretation. See *In re Pearson*, 181 USPQ 641 (CCPA 1974).

Applicant is also respectfully reminded that claims directed to apparatus *must* be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). Also, "[A]pparatus claims cover what a device *is*, not what a device *does*. (Emphasis in original). *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Note that the limitations "in a manner selected to achieve a predetermined temperature profile along said passageway in material of said part adjacent to said fluid passageway, in response to fluid flow through said fluid passageway" as recited in claim 1 are generally functional in nature, and thus, while considered, cannot be relied upon for patentability. Of course, while applicant MAY use functional language in the claims, such language is NOT to be solely relied upon for the patentability of apparatus claims.

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Furthermore, in response to applicant's arguments that the turbulence inducing structures of the *Schubert, Staskus, Clyde, Smith, and VEB Inducal* prior art references are "apparently configured to maximize heat transfer rates, and none of these references appear to teach turbulence inducing structure which has been intentionally configured to achieve heat transfer rates that produce a predetermined temperature profile within the material along the passageway", it is hereby noted that applicant admits that all of these references disclose turbulence inducing structures which are configured to achieve a particular (i.e., a maximum) heat transfer rate corresponding to given coolant flow rates and other standard, known heat transfer variables. In turn, a particular temperature profile within the material along the passageway is inherently associated with each particular desired heat transfer rate and vice versa. Applicant also admits that the claims of the instant invention are intentionally broad as written and thus not limited to any one specific set of temperature profiles; it follows that any given particular temperature profile associated with a maximized heat transfer rate along the passageway is not excluded from the scope of the claims as written. The aforementioned references thus read on the claims as previously applied thereto.

In response to applicant's argument that the intended uses of the respective inventions disclosed by *Schubert, Staskus, Clyde, Smith, and VEB Inducal* are *not* identical to the intended use of the instant application *to achieve a predetermined temperature profile within material along a passageway*, a recitation of the intended use of the claimed invention must result in a *structural* difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Applicant's arguments, however, fail to point out any specific particular *structural* differences between the claimed invention and the prior art.

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Applicant furthermore argues that the devices disclosed by *Schubert, Staskus, Clyde, Smith, and VEB Inducal* “have not been designed by selecting a predetermined temperature profile and then developing turbulence inducing structure which causes that predetermined profile to be realized”. Nevertheless, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., designing the inventive devices by selecting a predetermined temperature profile and then developing turbulence inducing structure which causes that predetermined profile to be realized) are at least not recited in the rejected apparatus claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, there appears to be nothing substantial in the abovementioned references to support applicant's assertion whereas at least some of the references (see the rejection of the claims as being anticipated by the *Staskus et al.* reference as discussed in greater detail in the appropriate section below) do in fact disclose designing a heat transfer apparatus in order to achieve a particular predetermined temperature profile.

Applicant's arguments thus fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims *patentably* distinguishes them from the references.

Applicant's arguments also thus do not comply with 37 CFR 1.111(c) because they do not *clearly* point out the *patentable* novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Response to Letter to the Examiner/Interview Summary

5. The examiner hereby wishes to point out for the record that applicant's “Letter to the Examiner” filed on August 12, 2004, inaccurately summarizes the telephonic status inquiry initiated by Legal Assistant Glenda Orrantia on August 2, 2004. According to the abovementioned letter, “Examiner Ciric

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informed Ms. Orrantia that an Office action had been written and was to be reviewed by a 'troubleshooter' before it would be mailed to Applicant." Meanwhile, Examiner Ciric merely indicated to Ms. Orrantia that the forthcoming Office action has generally been completed and would be forwarded to applicant shortly following clerical processing of the application and the Office action, including amendment entry (of the after-final amendment), reference copying, and any necessary trouble shooting to place the application in the proper status prior to mailing of the Office action. Primary Examiners do NOT have their applications reviewed by "trouble shooters". Applicant's attorneys are hereby strongly advised to contact the examiner *directly* as appropriate in the future to avoid misunderstandings of this sort.

Election/Restrictions

6. Claims 3, 11, and 12 continue to be withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 13, 2001.

Information Disclosure Statement

7. The information disclosure statement (IDS) submitted on April 11, 2003 was filed after the mailing date of the interview summary on December 3, 2002 indicating that finality of the Office action mailed on August 21, 2002 is being withdrawn. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

8. In view of the amendment filed on October 17, 2002, the objections to the specification as cited in the previous Office action are hereby being withdrawn.

Claim Objections

9. In view of applicant's arguments, the examiner hereby withdraws the objections to the claims as cited in the previous Office action.

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10. Claims 22 through 24 are objected to because of the following informalities: “a” immediately preceding “predetermined temperature profile” [claim 22, lines 8-9] should be replaced with “the” for improved grammatical correctness, readability, and clarity. Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Upon reconsideration, claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the intended scope of protection sought by claim 15 as written is not clear because claim 15 first recites that the inventive apparatus of preceding claim 14 “further” comprises a phased array antenna system, but then also recites that the *previously recited* part, structure, and electronic components “are portions of” this phased array antenna system, thus rendering the various limitations in the claim self-contradictory. If the apparatus comprises a part, a structure, and electronic components, and *further comprises* a phased array antenna system, then the elements of the phased array antenna system are *in addition to* the part, the structure, and the electronic components and thus *cannot be a portion of* the phased array antenna system. Alternately, recitation of the phased array antenna system may be said to constitute a double recitation of the previously recited parts included thereby (i.e., of the part, structure, and electronic components).

Claim Rejections - 35 U.S.C. § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

14. Claims 1, 2, 5 through 7, 17, 18, and 21 through 24 are rejected under 35 U.S.C. 102(b) as being anticipated by *Staskus et al.* (*previously of record*).

Staskus et al. discloses the invention essentially as claimed, namely a thermally conductive part or microchannel cooler 10 having a fluid passageway formed therein, a turbulence inducing structure including variably spaced turbulence inducing portions or baffles 38 extending from a surface of the conductive substrate/cold plate 14 along the passageway to maintain a uniform temperature profile across the electronic array 50 and the conductive substrate/part/cold plate 14 disposed in direct thermal contact with the array 50 [see column 7, lines 5-21].

The reference thus reads on the claims.

15. Alternately for claims 1, 2, 17, and 22, claims 1, 2, 4, 7, 17, 20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by *Smith* (*previously of record*).

Smith discloses the invention essentially as claimed, including a thermally conductive flat plate having a fluid passageway formed therein and turbulence inducing structures each having an annular inward protrusion as shown in the figures to achieve a particular desired (i.e., "predetermined") heat transfer efficiency and rate through the flat plate. A predetermined temperature profile inherently

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corresponds to any given predetermined heat transfer rate and heat transfer efficiency associated with a particular structural configuration of the coolant passageway and coolant flow therethrough.

The reference thus reads on the claims.

16. Alternately for claims 1, 2, 4, 7, 17, 20, and 22, claims 1, 2, 4, 7, 9, 13, 17, 20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by *VEB Inducal* (previously of record).

VEB Inducal [especially Figure 2] discloses the invention essentially as claimed, including a thermally conductive flat or cold plate 2b having a fluid passageway or channel 3 formed within the plate 2b, and also including a turbulence inducing structure such as element 2c as well as inwardly projecting annular protrusion 1a, with tubing 1 at least partially imbedded within the cold plate 2b, the turbulence inducing structure 2c being designed to achieve a particular desired (i.e., "predetermined") heat transfer efficiency and rate through the flat plate. A predetermined temperature profile inherently corresponds to any given predetermined heat transfer rate and heat transfer efficiency associated with a particular structural configuration of the coolant passageway and coolant flow therethrough.

The reference thus reads on the claims.

17. Alternately for claims 1, 2, 7, 17, and 22, claims 1, 2, 7, 8, 17, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by *Clyde* (previously of record).

Clyde [especially Figures 3, 4, and 6] discloses the invention essentially as claimed, including a thermally conductive part or plate or cold plate 84 or 86 or 214 having a fluid passageway or channel formed in between high areas such as 96 and low areas such as 98, with the high areas such as 96 comprising protrusions extending from a surface of the fluid passageway as recited in the claims of the instant invention. A predetermined temperature profile inherently corresponds to any given predetermined pattern of protrusions or high areas 96 and low areas 98 and a given flow therebetween.

The reference thus reads on the claims.

18. Alternately, claims 1, 2, 5, 6, 17, 18, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by *Perkins* (made of record by applicant's IDS submission).

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Perkins [especially Figures 1 and 2] discloses a heat exchanger structure for cooling electronic equipment attached thereto essentially as claimed, including: a thermally conductive part or metal plates or walls 15, 16, and 20 having a fluid passageway 13 formed therein; turbulence inducing structure including protrusions or fingers 26 extending from a surface of the passageway 13 towards the longitudinal central axis of the fluid passageway 13, the protrusions or turbulence inducing structure being disposed along the passageway in a manner selected to achieve a predetermined temperature profile in the thermally conductive part or plates 15, 16, and 20 to thus provide uniform cooling of the electronic circuit boards 21 attached thereto. A predetermined temperature profile inherently corresponds to any given predetermined pattern of protrusions or fingers 26 and a given flow therebetween, for example.

The reference thus reads on the claims.

19. Alternately, claims 1, 2, 4 through 7, 17, 18, and 22 through 24 are rejected under 35 U.S.C. 102(b) as being anticipated by *Gopin et al.* (*made of record by applicant's IDS submission*).

Gopin et al. [especially Figures 1 through 3] discloses a heat exchanger apparatus essentially as claimed, including: a thermally conductive part or metallic plates 2 and 3 having a fluid passageway 1 formed therein; turbulence inducing structure including protrusions or dimples 4 extending from a surface of the passageway 1 towards the longitudinal central axis of the fluid passageway 1, the protrusions or turbulence inducing structure or dimples 4 being disposed along the passageway in a manner selected to achieve a predetermined temperature profile there along, including in a manner such that the longitudinal spacing of the turbulence inducing structures or dimples varies along the passageway 1.

The reference thus reads on the claims.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

22. Alternately for claim 21, claims 10, 14, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *VEB Inducal* (previously of record).

As noted in greater detail above, *VEB Inducal* discloses a cooling apparatus essentially as claimed, including that the inventive device is a fluid cooled heat sink for a semiconductor device and that tubing 1 is made from a metallic material.

While *VEB Inducal* does not specifically disclose that tubing 1 includes stainless steel, for example, Official Notice is hereby taken by the examiner that it is known in the art to use stainless steel in making heat exchanger tubing.

While *VEB Inducal* furthermore does disclose that the inventive device is to be used for cooling a semiconductor device and does furthermore suggest that the semiconductor device to be cooled is to be thermally coupled with plate 2b, *VEB Inducal* does not specify that a plurality of electronic components are thermally coupled with the thermally conductive part or plate 2b. Nevertheless, it is not inventive to merely multiply or increase the number of electronic components which are thermally coupled with the plate 2b.

It would thus have been obvious to one skilled in the art at the time of the invention to modify the semiconductor cooling device of *VEB Inducal* by specifically having tubing 1 be made of either stainless steel or an alloy thereof in order to simultaneously ensure high thermal conductance and durability of the

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tubing while keeping both manufacturing and maintenance costs relatively low. It would also have been obvious to one skilled in the art at the time of the invention to modify the semiconductor cooling device of *VEB Inducal* by merely increasing the number of electronic components which are thermally coupled to the cooling device from one to more than one in order to effectively and maximally utilize the cooling capability of the device, for example.

23. The non-application of art against claim 15 should not be construed as an indication that the claim contains allowable subject matter but rather that the claim could not be examined on the merits due to indefiniteness.

Conclusion

24. The following additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ketonen et al., Leatzow, McAdam et al., Houchman, Withers, Jr., et al. (both references), Furukawa et al., Pautsch et al., Nakado et al., Matsushita Electric Ind. Co. Ltd., Satoru Fujii, Furukawa Electric Co. Ltd., Sumitomo Light Metal Ind. Ltd., Belgorod Power Equipment, Boblikov et al., Booth et al., Gulf and Western Industries, Inc., and Wong all show that is notoriously well-known in the art of designing heat transfer apparatus to have turbulence inducing structure which may, for example, include evenly and/or variably spaced protrusions disposed along external and/or internal heat transfer/flow surfaces of the apparatus in order to effect particular heat transfer rates both along these surfaces and in the immediately adjacent conductive material.

Pluymers et al. and Japan Radio Co. Ltd. each discloses a phased antenna array system with cooling.

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Additionally, applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the statement set forth in 37 CFR 1.17(p) on April 11, 2003 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric, whose telephone number is (703) 308-3925.

While she works a flexible schedule that varies from day to day and from week to week, Examiner Ciric may generally be reached at the Office during the work week between the hours of 10 a.m. and 6 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel, can be reached on (703) 308-1272.

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The NEW central official fax phone number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc

August 20, 2004

A handwritten signature in cursive script, appearing to read "Ljiljana Ciric".

**LJILJANA CIRIC
PRIMARY EXAMINER**